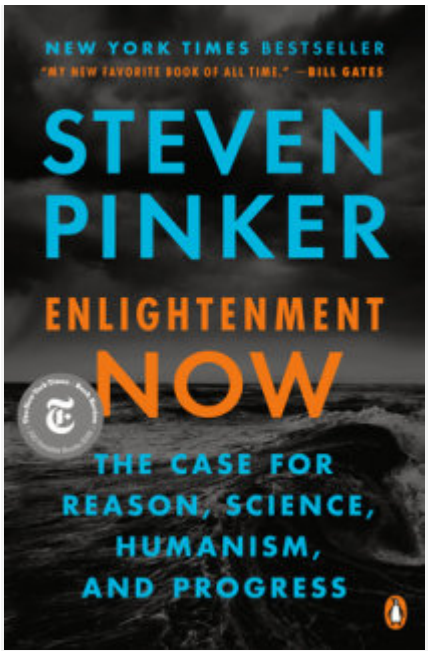
Excerpt From:

Enlightenment Now: The Case for Reason, Science, Humanism, and Progress (Viking, 2018)

By Steven Pinker



Part I

Enlightenment

The common sense of the eighteenth century, its grasp of the obvious facts of human suffering, and of the obvious demands of human nature, acted on the world like a bath of moral cleansing. —Alfred North Whitehead [English Mathematician and Philosopher, 1861—1947]

In the course of several decades giving public lectures on language, mind, and human nature, I have been asked some mighty strange questions. Which is the best language? Are clams and oysters conscious? When will I be able to upload my mind to the Internet? Is obesity a form of violence?

But the most arresting question I have ever fielded followed a talk in which I explained the common place among scientists that mental life consists of patterns of activity in the tissues of the brain. A student in the audience raised her hand and asked me:

"Why should I live?"

The student's ingenuous tone made it clear that she was neither suicidal nor sarcastic but genuinely curious about how to find meaning and purpose if traditional religious beliefs about an immortal soul are undermined by our best science. My policy is that there is no such thing as a stupid question, and to the surprise of the student, the audience, and most of all myself, I mustered a reasonably creditable answer. What I recall saying—embellished, to be sure, by the distortions of memory and *l'esprit de l'escalier*, the wit of the staircase—went something like this:

In the very act of asking that question, you are seeking reasons for your convictions, and so you are committed to reason as the means to discover and justify what is important to you. And there are so many reasons to live!

As a sentient being, you have the potential to flourish. You can refine your faculty of reason itself by learning and debating. You can seek explanations of the natural world through science, and insight into the human condition through the arts and humanities. You can make the most of your capacity for pleasure and satisfaction, which allowed your ancestors to thrive and thereby allowed you to exist. You can appreciate the beauty and richness of the natural and cultural world. As the heir to billions of years of life perpetuating itself, you can perpetuate life in turn. You have been endowed with a sense of sympathy—the ability to like, love, respect, help, and show kindness—and you can enjoy the gift of mutual benevolence with friends, family, and colleagues.

And because reason tells you that none of this is particular to you, you have the responsibility to provide to others what you expect for yourself. You can foster the welfare of other sentient beings by enhancing life, health, knowledge, freedom, abundance, safety, beauty, and peace. History shows that when we sympathize with others and apply our ingenuity to improving the human condition, we can make progress in doing so, and you can help to continue that progress.

Explaining the meaning of life is not in the usual job description of a professor of cognitive science, and I would not have had the gall to take up her question if the answer depended on my arcane technical knowledge or my dubious personal wisdom. But I knew I was channeling a body of beliefs and values that had taken shape more than two centuries before me and that are now more relevant than ever: the ideals of the Enlightenment.

The Enlightenment principle that we can apply reason and sympathy to enhance human flourishing may seem obvious, trite, old-fashioned. I wrote this book because I have come to realize that it is not. More than ever, the ideals of reason, science, humanism, and progress need a wholehearted defense. We take its gifts for granted: newborns who will live more than eight decades, markets overflowing with food, clean water that appears with a flick of a finger and waste that disappears with another, pills that erase a painful infection, sons who are not sent off to war, daughters who can walk the streets in safety, critics of the powerful who are not jailed or shot, the world's knowledge and

culture available in a shirt pocket. But these are human accomplishments, not cosmic birthrights. In the memories of many readers of this book—and in the experience of those in less fortunate parts of the world—war, scarcity, disease, ignorance, and lethal menace are a natural part of existence. We know that countries can slide back into these primitive conditions, and so we ignore the achievements of the Enlightenment at our peril.

In the years since I took the young woman's question, I have often been reminded of the need to restate the ideals of the Enlightenment (also called humanism, the open society, and cosmopolitan or classical liberalism). It's not just that questions like hers regularly appear in my inbox. ("Dear Professor Pinker, What advice do you have for someone who has taken ideas in your books and science to heart, and sees himself as a collection of atoms? A machine with a limited scope of intelligence, sprung out of selfish genes, inhabiting space-time?") It's also that an obliviousness to the scope of human progress can lead to symptoms that are worse than existential angst. It can make people cynical about the Enlightenment-inspired institutions that are securing this progress, such as liberal democracy and organizations of international cooperation, and turn them toward atavistic alternatives.

The ideals of the Enlightenment are products of human reason, but they always struggle with other strands of human nature: loyalty to tribe, deference to authority, magical thinking, the blaming of misfortune on evil doers. The second decade of the 21st century has seen the rise of political movements that depict their countries as being pulled into a hellish dystopia by malign factions that can be resisted only by a strong leader who wrenches the country backward to make it "great again." These movements have been abetted by a narrative shared by many of their fiercest opponents, in which the institutions of modernity have failed and every aspect of life is in deepening crisis—the two sides in macabre agreement that wrecking those institutions will make the world a better place. Harder to find is a positive vision that sees the world's problems against a background of progress that it seeks to build upon by solving those problems in their turn.

If you still are unsure whether the ideals of Enlightenment humanism need a vigorous defense, consider the diagnosis of Shiraz Maher, an analyst of radical Islamist movements. "The West is shy of its values—it doesn't speak up for classical liberalism," he says. "We are unsure of them. They make us feel uneasy." Contrast that with the Islamic State, which "knows exactly what it stands for," a certainty that is "incredibly seductive"—and he should know, having once been a regional director of the jihadist group Hizb ut-Tahrir.

Reflecting on liberal ideals in 1960, not long after they had withstood their greatest trial, the economist Friedrich Hayek observed, "If old truths are to retain their hold on men's minds, they must be restated in the language and concepts of successive generations" (inadvertently proving his point with the expression men's minds). "What at one time are their most effective expressions gradually become so worn with use that they cease to carry a definite meaning. The underlying ideas may be as valid as ever, but the words,

even when they refer to problems that are still with us, no longer convey the same conviction."

This book is my attempt to restate the ideals of the Enlightenment in the language and concepts of the 21st century. I will first lay out a framework for understanding the human condition informed by modern science—who we are, where we came from, what our challenges are, and how we can meet them. The bulk of the book is devoted to defending those ideals in a distinctively 21st-century way: with data. This evidence-based take on the Enlightenment project reveals that it was not a naïve hope. The Enlightenment has worked—perhaps the greatest story seldom told. And because this triumph is so unsung, the underlying ideals of reason, science, and humanism are unappreciated as well. Far from being an insipid consensus, these ideals are treated by today's intellectuals with indifference, skepticism, and sometimes contempt. When properly appreciated, I will suggest, the ideals of the Enlightenment are in fact stirring, inspiring, noble—a reason to live.

Chapter 1

Dare to Understand!

What is enlightenment? In a 1784 essay with that question as its title, Immanuel Kant answered that it consists of "humankind's emergence from its self-incurred immaturity," its "lazy and cowardly" submission to the "dogmas and formulas" of religious or political authority. Enlightenment's motto, he proclaimed, is "Dare to understand!" and its foundational demand is freedom of thought and speech. "One age cannot conclude a pact that would prevent succeeding ages from extending their insights, increasing their knowledge, and purging their errors. That would be a crime against human nature, whose proper destiny lies precisely in such progress."

A 21st-century statement of the same idea may be found in the physicist David Deutsch's defense of enlightenment, The Beginning of Infinity. Deutsch argues that if we dare to understand, progress is possible in all fields, scientific, political, and moral:

Optimism (in the sense that I have advocated) is the theory that all failures—all evils—are due to insufficient knowledge. . . .Problems are inevitable, because our knowledge will always be infinitely far from complete. Some problems are hard, but it is a mistake to confuse hard problems with problems unlikely to be solved. Problems are soluble, and each particular evil is a problem that can be solved. An optimistic civilization is open and not afraid to innovate, and is based on traditions of criticism. Its institutions keep improving, and the most important knowledge that they embody is knowledge of how to detect and eliminate errors

What is the Enlightenment? There is no official answer, because the era named by Kant's essay was never demarcated by opening and closing ceremonies like the Olympics, nor are its tenets stipulated in an oath or creed. The Enlightenment is conventionally placed in the last two-thirds of the 18th century, though it flowed out of

the Scientific Revolution and the Age of Reason in the 17th century and spilled into the heyday of classical liberalism of the first half of the 19th. Provoked by challenges to conventional wisdom from science and exploration, mindful of the bloodshed of recent wars of religion, and abetted by the easy movement of ideas and people, the thinkers of the Enlightenment sought a new understanding of the human condition. The era was a cornucopia of ideas, some of them contradictory, but four themes tie them together: reason, science, humanism, and progress.

Foremost is reason. Reason is nonnegotiable. As soon as you show up to discuss the question of what we should live for (or any other question), as long as you insist that your answers, whatever they are, are reasonable or justified or true and that therefore other people ought to believe them too, then you have committed yourself to reason, and to holding your beliefs accountable to objective standards. If there's anything the Enlightenment thinkers had in common, it was an insistence that we energetically apply the standard of reason to understanding our world, and not fall back on generators of delusion like faith, dogma, revelation, authority, charisma, mysticism, divination, visions, gut feelings, or the hermeneutic parsing of sacred texts.

It was reason that led most of the Enlightenment thinkers to repudiate a belief in an anthropomorphic God who took an interest in human affairs. The application of reason revealed that reports of miracles were dubious, that the authors of holy books were all too human, that natural events unfolded with no regard to human welfare, and that different cultures believed in mutually incompatible deities, none of them less likely than the others to be products of the imagination. (As Montesquieu wrote, "If triangles had a god they would give him three sides.") For all that, not all of the Enlightenment thinkers were atheists. Some were deists (as opposed to theists): they thought that God set the universe in motion and then stepped back, allowing it to unfold according to the laws of nature. Others were pantheists, who used "God" as a synonym for the laws of nature. But few appealed to the law-giving, miracle-conjuring, son-begetting God of scripture.

Many writers today confuse the Enlightenment endorsement of reason with the implausible claim that humans are perfectly rational agents. Nothing could be further from historical reality. Thinkers such as Kant, Baruch Spinoza, Thomas Hobbes, David Hume, and Adam Smith were inquisitive psychologists and all too aware of our irrational passions and foibles. They insisted that it was only by calling out the common sources of folly that we could hope to overcome them. The deliberate application of reason was necessary precisely because our common habits of thought are not particularly reasonable.

That leads to the second ideal, science, the refining of reason to understand the world. The Scientific Revolution was revolutionary in a way that is hard to appreciate today, now that its discoveries have become second nature to most of us. The historian David Wootton reminds us of the understanding of an educated Englishman on the eve of the Revolution in 1600:

He believes witches can summon up storms that sink ships at sea. . . . He believes in

werewolves, although there happen not to be any in England—he knows they are to be found in Belgium. . . . He believes Circe really did turn Odysseus's crew into pigs. He believes mice are spontaneously generated in piles of straw. He believes in contemporary magicians. . . . He has seen a unicorn's horn, but not a unicorn.

He believes that a murdered body will bleed in the presence of the murderer. He believes that there is an ointment which, if rubbed on a dagger which has caused a wound, will cure the wound. He believes that the shape, colour and texture of a plant can be a clue to how it will work as a medicine because God designed nature to be interpreted by mankind. He believes that it is possible to turn base metal into gold, although he doubts that anyone knows how to do it. He believes that nature abhors a vacuum. He believes the rainbow is a sign from God and that comets portend evil. He believes that dreams predict the future, if we know how to interpret them. He believes, of course, that the earth stands still and the sun and stars turnaround the earth once every twenty-four hours.

A century and a third later, an educated descendant of this Englishman would believe none of these things. It was an escape not just from ignorance but from terror. The sociologist Robert Scott notes that in the Middle Ages "the belief that an external force controlled daily life contributed to a kind of collective paranoia":

Rainstorms, thunder, lightning, wind gusts, solar or lunar eclipses, cold snaps, heat waves, dry spells, and earthquakes alike were considered signs and signals of God's displeasure. As a result, the "hobgoblins of fear" inhabited every realm of life. The sea became a satanic realm, and forests were populated with beasts of prey, ogres, witches, demons, and very real thieves and cut throats. . . . After dark, too, the world was filled with omens portending dangers of every sort: comets, meteors, shooting stars, lunar eclipses, the howls of wild animals.

To the Enlightenment thinkers the escape from ignorance and superstition showed how mistaken our conventional wisdom could be, and how the methods of science—skepticism, fallibilism, open debate, and empirical testing—are a paradigm of how to achieve reliable knowledge.